

# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

JANUARY 1, 1945



**New Butterfly Tail Beechcraft:** *This experimental airplane is a modified AT-10 Beechcraft plywood transitional trainer which operates without either horizontal or vertical tail surfaces and a flying test unit for various advanced ideas.*

## **Russians Negotiating for U. S. Commercial Planes**

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## **Tentative World ATA Articles Put Airlines in Control**

Preliminary program drawn up in Washington discloses strong desire for close coordination with international organization.....Page 36

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1945 production figures raised by 2,617 aircraft to 78,227, Krug discloses; some new types play important role in revisions.....Page 24

## **Aviation Faces Crucial Problem In 44 Legislatures**

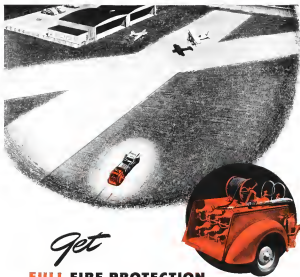
Vast muddle of overlapping and conflicting state and federal regulations possible unless some uniformity of measures can be achieved.....Page 14

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System developed from All American's airmail and cargo pick-up; expect to extend experiments to cargo and fighter planes.....Page 11

## **Predict \$270 Million Annual Outlay on Ports, Planes**

Twentieth Century Fund forecasts expenditures in analysis of transportation and equipment construction for period 1946-60.....Page 33



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THE AVIATION NEWS

# Washington Observer

**CAPITAL OUTLOOK**—Gone is the talk of V-E Day setbacks in Washington and government agencies focus on mention of reconstruction and the War Production Board is operating on the theory that the war in Europe will go on indefinitely. Indicative of the Washington viewpoint at the moment is that new plants which can not begin to produce critical war materials for months are to be built and aircraft production has been increased between four and five per cent in the past week. This does not mean that all conversion planning has ceased since the need for such work still remains and will even be emphasized as a result in the sudden change in the military situation.

**MORE TO COME**—The easing up of war production in 1945 which seemed almost a certainty a few months ago is not now in sight and manufacturers can look forward only to increased pressure from Washington for more and more production. Procurement agencies have not aside the lagaboon of over-ordering for the time being in view of the demands of the armed forces in both the European theater and the Pacific.

**RACE TRACKS CLOSING**—The Byrnes stroke closing race tracks is understood to be most directly related to the manpower problems of the West Coast aircraft industry. WPB Chairman Knapp is understood to have discussed the race track angle in his recent trip to the West Coast, but came away without any specific recommendations from the industry. However, when he discussed the question back in Wash-

ington, it was decided that the action would be in line with the whole Government policy of tightening up on the war production program.

**FABRIC SUPPLIES**—Reports coming into the War Production Board indicate that aircraft fabric supplies are moving into a tight position, as a result of the upward revision of the 1945 production program. The tightness also traces to the stepped-up demands by the military procurement agencies for tire cord, cotton duck and other woven cotton products.

**ALUMINUM AGAIN**—Aluminum shortages are beginning to be reported again, sheets and castings including the flat that far. Just how serious the situation is has not yet been determined by production officials in Washington, but it is being watched closely. Primary metal is said to be in ample supply, but manufacturers in several instances have warned Washington for assistance in getting their orders placed with aluminum fabricators so that military orders can be filled. With the Army and Navy both increasing their aircraft requirements, WPB expects increasing pressure on fabricated aluminum in various forms.

**SURPLUS PLANES AHEAD**—A tremendous buckrags battle is going on in Washington over distribution of surplus planes overseas, with the Army seeking to take over control of disposal machinery. The Foreign Economic Administration will be out of the picture, and the Army's attempt to take over a long rapidly

Line of Canadian-built PBY-5A's ready for delivery to American bases.





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## New Lend-Lease Protocol Upsets Soviet Bid for Latest Transports

Russians reported negotiating with several companies for new model U. S. passenger and cargo planes under three tentative proposals.

The Soviet Government is reported to have been quietly negotiating for some time with several American companies in an effort to obtain latest types of aircraft. The negotiations, according to Washington sources, are of a strictly commercial nature, and in line with the reports that the Russians intended to withdraw from Lend-Lease after the contract entered into under the 1944-45 Protocol have been completed, about June 30.

**New Protocol**—However, it has now been announced that a new protocol is in the works and that may retard the negotiations which were reported to include Soviet proposals, tentatively launched with U. S. firms, which fall into three categories:

► **Outright purchase** by Russia of several of each of the latest model transport planes, both passenger and cargo. American firms were said to be cool toward the sale of a limited number.

► **Purchase of one or more of several favored types** along with the right of the Soviet Government to use the design for their production. This proposal includes sale of technological information and training of certain key Russian engineers in production methods of the American firms for an agreed-upon fee.

► **Establishment of one or more plants in Russia** by the American firm or firms, to turn out U. S.-designed planes for the Soviet.

The Russians are said to have made these overtures in a more or less official way to Douglas, Lockheed, Boeing and Consolidated Vultee. Both Douglas and Consolidated had fairly extensive commercial relationships with the Russians before the war and Consolidated sent a staff of technicians to Russia in the middle thirties to

help set up aircraft plants and train Soviet engineers, and Douglas engineers helped set up a plant which has been producing DC-3's.

► **Work Through ANTORG**—Government officials in Washington indicated any such transactions as those mentioned would be handled through ANTORG, and the Soviet Government Purchasing Commission, in Washington. Russians recently started moving units from their purchasing mission, which was set up in 1941 to handle Lend-Lease transactions, to Antorg in New York which handled all Soviet commercial transactions in the United States before the war.

The Russians informed some U. S. officials that the transfer would be confined to an increased scale after the first of the year and that by June 30, when the current Lend-Lease agreement expires, their purchasing mission will

be entirely liquidated. That, however, was before the State Department's announcement that a new Lend-Lease protocol is in the making, and revision in the plans undoubtedly will be made.

## New Corsairs Used For Carrier Duty

New versions of the Chance Vought F4U Corsair are going into carrier duty. First designed as shipboard planes, the Corsair has been used chiefly as a land-based fighter by the Marine air arm and by some Navy squadrons.

The model is returning to carrier duty will be the F4U-1D, which reportedly has better deck-landing characteristics than its predecessor, and which incorporates other changes that add to its overall value.

► **One of Fastest Fighters**—The Corsair is one of the fastest fighters in the world, powered with a 2,000 hp Pratt & Whitney Double Wasp engine. Several of them, flown by Marine pilots, missed breaking the cross-country record of the P-41 Mustang only because of weather conditions at the ter-



ROCKETS ON WINGS OF MARINE CORSAIR:

This new photo shows the rockets affixed to the wings of a Marine Vought Corsair which against the forepart of this fighter plane today is in Pacific operations.

mal. The planes were over the field in record-breaking time, but could not land because of a zero ceiling.

The British have been running their carrier squadrons with the Caravelle for the past year, while in the Pacific they have been used by Marine squadrons as fighter-bombers carrying 2,000 pounds of bombs. They also have been used as night fighters, and presumably are among the Navy fighters equipped with rockets.

## Carroll to Address SAE at Detroit

Bel Aircraft president to be awarded Daniel Guggenheim Medal for 1944 in Jan. 10 meeting.

"Steps Up in the Development of an Air Force" will be the subject of Brig. Gen. Franklin G. Carroll, chief of engineering, Air Technical Service Command, Wright Field, principal speaker at the Annual Dinner of the Society of Automotive Engineers, Wednesday night, Jan. 10, in Detroit. Lawrence D. Bell, president of Bell Aircraft Corp., Buffalo, will be awarded the Daniel Guggenheim Medal for 1944. Eugene E. Wilson, vice-chairman of United Aircraft Corp., will be toastmaster.

The dinner program will be held in connection with the five-day War Engineering meeting of SAE

at which numerous technical papers on various phases of aviation development will be presented by leading engineers and authorities. A Aviation Topics—Speakers on aviation subjects during the sessions include: L. Welsh Pagan, chairman, and Dr. Edward Warner, member of the Civil Aeronautics Board; Charles F. Kettering, vice-president in charge of research, General Motors Corp.; William B. Stout, head of Staff Research Division, Consolidated Vultee Corp.; Dr. Alexander Klemin, New York University; Paul Stafford, Civil Aeronautics Administration; R. H. Powell, chief engineer, Koffert Aircraft Corp.; Rex H. Hane, chief engineer, Allison Division, General Motors Corp.; William Littlewood, vice-president in charge of engineering, American Airlines; Charles French, chief engineer, Eastern Airlines; Arthur Mott, Packard Motor Co. and others.

Symposiums will be presented on, Defining the Market for Aircraft for Local Air Transport Service; Airport Design; Cockpit Engineering; and Aircraft Engine Detonation Indicators. Other papers will include discussions of Engine Control Coordination, Primary Balancing of Radial Engines, International Aircraft Airworthiness Requirements, Basic Factors of Helicopter Design, Aero-Acoustic Factors in Specific Aircraft Design, Turbine Compressing with the Piston Engine, Electronic Controls, Blended Wings, Low-drag

Aircraft, Flow Characteristics of Injection Systems, Electronic Analysis of Airplane Hydraulic Brake Systems, and Future of Standardization in the Aeronautical Industry.

## C-W Louisville Plant To Modify B-29's

Assembly work on C-46 Commandos to continue simultaneously with conversion program.

Facilities of Curtiss-Wright's plant at Louisville are to be converted for participation in the Boeing B-29 modification program. Present plans call for continuing assembly work on the C-46 Commandos simultaneously with the modification work during the changeover period.

The plant has been used for final assembly of C-46's from passenger assembly companies previously at the Curtiss-Wright St. Louis plant.

With the B-29 program starting immediately, it will be worked into the plant operations gradually and an estimated 40 C-46 Commandos contract in mid-1946 will absorb the entire facilities. Any excess production from the St. Louis plant will be shipped to Buffalo for assembly there, where space has been made available through completion of work in the Curtiss P-40.

► **Won't Affect Production**—The changes will not affect production programs of either the St. Louis or the Buffalo plant, and final assembly will not be undertaken under present plans at St. Louis until commercial C-54 production is authorized.

Operating experience should make it possible to cannibalize all C-46 assembly activities into one of the 1,800 foot long production line areas and clear the parallel production area for simultaneous modification of the Boeing B-29. G. J. Brandewiese, general manager of the Curtiss plant at Louisville, and Adjutant Stafford Field can be delegated for operation of the Superfortresses, one factor in the decision to incorporate the modification line in the Louisville facility.

► **Retain Personnel**—An extensive personnel retraining program will also be fitted into the new program to expedite the work on the B-29's, Curtiss officials said.

The Louisville plant was erected in 1942 and began work on the experimental all-wood C-54 Car-

ven four months after breaking ground. The Curtiss program, started when metal was critical, later was canceled. The plant was re-tooled and converted for assembly of the C-46's. At the same time, the plant began modifying Curtiss Helldivers built in the Columbus plant and Buffalo-built C-46's. The Louisville plant became assembling the first C-46 in December, 1943. It has been meeting production schedules for the last seven months in the face of changing conditions.

## Study New Engine Parts Control Order

Aircraft manufacturers affected by regulation in present form, although WFE officials are reported preparing revision to reduce production of plane power plants.

Possible effects of the new WFE engine parts control order are being studied by aircraft production officials both in Washington and in the field, since this little publicized regulation, while intended primarily to assure a full flow of engine parts, need requirement of military truck and landing craft programs, may affect all engine manufacturers.

WFE officials are said to be preparing a clarifying regulation or revision to exclude aircraft engines, but the regulation as issued does not contain this exclusion. The order creates the position of Special Assistant to WFE's Operations vice-chairman for Engine Parts Control and grants him wide powers over the engine production industry, including all supplies of parts, components and sub-components.

The engine parts control group regulates "production and shipment of all kinds of internal combustion engines and all kinds of parts for such engines and components of such parts."

► **Exempt Aircraft Engines**—WFE officials say the regulation was never intended to cover aircraft engines, but concedes that in its present form it could be interpreted to cover all engines, including aircraft.

The responsibilities of the engine parts control group include powers to call upon any plant to file and freeze a production or shipping schedule, to change a schedule, to accept or reject an order from a new or an old cus-



CAMRA CARRYING MUSTANG?

Races of the photo-reconnaissance Mustang are in the tail section, built to house either oblique or vertical camera without sacrifice of the fighter's guns or bomb loads. Note the lens window off of the Army star, for oblique shots. The mechanism indicates blank lines on the wing that help pilot frame his oblique shots.

tommer, to allocate or not make a specified portion of product on hand for a specified recipient, to cancel a purchase order held by one manufacturer and place it with another, and to "take such other action as it (the WFE) deems necessary with respect to ordering, production or shipment of parts."

Observers in Washington noted two circumstances in connection with the order that tended to give the impression that aircraft engine producers might be affected: 1) The basic instrument of the special assistant's powers was taken from WFE's automotive division and has been given to the special assistant to administrator, aided by an advisory committee which includes Aircraft Resources Control Office representatives. 2) WFE's scheduling orders ordinarily are written with aircraft excluded, since aircraft products are completely controlled by their own scheduling order. The new regulation, as pointed out, omits this usual exclusion at its present form.

► **Special Assistant Named**—Robert M. Hatfield, Jr., recently a lieutenant in the Navy, has been recommended to take the job as special assistant in charge of engine parts control. Capt. J. J. Laming has been assigned to represent ARCO on the Advisory Engine Parts Control Committee, which includes Army, Navy, Office of Defense Transportation and WFE representatives.

Hatfield also has authority to appoint a representative of the aircraft industry drawn to the committee, but this division at this

time has not decided to ask for representation.

## Restrictions Eased On Civilian Flying

Relaxing of wartime restrictions on civilian flying recently effected by the Civil Aeronautics Board, through amendment of Section 90.60, Civil Air Regulations, includes:

- **Waiving requirement for maintenance of guards at airports or leaving aircraft in inoperative condition when unguarded.**
- **Eliminating requirement that planes land only at specially designated landing places. Hereafter, formal designation is required only for fields at which plane will be based, with occasional landings and takeoffs permitted at pilot's discretion. Flights waiting to land planes at points not now designated as landing areas may apply to Administrator of Civil Aeronautics for designation.**
- **Restrictions still in effect include:**

- **In Eastern and Western vital defense areas, each individual flight of civil aircraft must be approved by Defense Command, with approval obtained in most cases through CAA.**
- **In congested areas, and particularly in vital defense areas, military authority may establish local flying areas for each designated landing area in order to avoid conflict with nearby military activity. Civil aircraft which confuses its flights to such local flying areas does not require flight clearance.**



## FINISHING TOUCHES:

Workers in Chevrolet Division of General Motors putting the finishing touches on the big B-29 Pratt & Whitney 18 cylinder aircraft engines of more than 2,000 hp.

## Contract Settlement Act Generally OK

No changes expected by new Congress beyond some supplemental legislation to provide recovery loans for small manufacturers.

No immediate changes are foreseen in the Contract Settlement Act as the new Congress convenes, although there may be some supplemental legislation to provide more adequate financial assistance for small manufacturers during the recovery period.

A report of the war contracts subcommittee to the Senate Military Affairs committee says careful inquiry has failed, as yet, to uncover the need for any amendments to the Contract Settlement Act and adds that it is generally agreed that the act, in its present stands, provides a thoroughly satisfactory legislative foundation for solving the problems with which it deals.

The aircraft industry generally has found the terms of the act satisfactory, although there has been some criticism of its administration.

Supplemental Legislation — The Senate committee does believe,

however, that supplemental legislation is needed to cover the situation of many small manufacturers whose fundamental need with terminated war contracts will be reconstruction loans, based on a liberal appraisal of their future business needs. Such loans would absorb much of the uncertainty and verification problems involved in termination loans.

In one transaction, they would meet all the reconstruction needs of a small company, including among others, financing an aviation insurance claim. At present, the Steller War Plants Corp. is not authorized to make reconstruction loans. Its authority is limited to loans for war and essential civilian production.

The life of the corporation expires July 1, 1943, and the new Congress is expected to take prompt action to extend it.

## Canada Freight Line Gets 20 Stranraers

Surplus flying boats, made by Canadian Vickers Ltd., has been used on coastal patrol work.

Canada has sold 20 Stranraer flying boats made by Canadian Vickers Ltd., early in the war, to W. C. C. of Montreal, for freight and transportation purposes. These aircraft are now in Vancouver. War Assets Corp., Canadian government surplus commodity company, did not recommend the price at which the aircraft, used on coastal patrol, were sold. Canada has also sold, for an undisclosed price, one de Havilland Tiger Moth aircraft to Lem Topp Flying Service, Toronto.

Previously War Assets Corp. had disclosed that 309 aircraft had been sold for \$393,343. A breakdown of these sales shows that 138 Fleet Finch fighters and one Fleet Freighter went to Cuz, Balcón, S. A. Mexico, the Mexican agency of C. H. Babb & Co.

Other Sales — The remaining aircraft of this first big sale were sold to a number of transportation companies. One Fleet Freighter and one Fleet Finch went to Labrador Mining & Exploration Co. for transport to Labrador. One Grumman Goose amphibian was sold to Shell Oil Co. of Ecuador.

Lockheed 142 and one Lockheed 12 went to Empresa de Transportes Aereos, Brazil. A Lockheed 142 and a Lockheed 12A were sold to Maritime Central Airways,

operating from St. John, N.D., to Charleston, P.E.I., Canada. A Grumman Goose amphibian was sold to Laurentian Air Service, Ottawa, for freighting in northern Canada. Six Anson twin engine aircraft and one Lockheed 12 went to Lima-Aeron Transcontinental, Brazil. Another Lockheed 12A was sold to Fairchild Aerial Surveys for photography operations in Ecuador. One Anson was sold to Roberto J. Mendes & Associates, Peru. Two de Havilland Tiger Moths were sold to Superior Airways Ltd., Canada, for flying school and transportation, and one Stinson went to a Canadian, British West Indies, air cadet camp.

## Duramold Shifted To Jamestown, N. Y.

A projected move of Duramold Division of Fairchild Engine and Airplane Corp., Buffalo, N.Y., has been canceled and operations of this division will be moved to Jamestown, N.Y., to a plant formerly used by American Aviation Corp.

J. Carlton Ward, Jr., president of Fairchild, said the company would close two of its New York City plants and move the equipment to Jamestown as soon as possible. American Aviation Corp. facilities have been idle, except for an office, since last March, when production of plywood planes there was halted.

Occupied By Finances — The Burlington plant which Duramold originally planned to take over was occupied instead by Frontiers Tire and Rubber Co., for manufacture of big tires. Duramold has a number of contracts for undelivered AAF material.

## 'Copter Piers Urged

A proposal calling for construction of two \$10,000,000 piers at Boston, each to have roof-top helicopter landing area, is contained in a bill filed with the Massachusetts Legislature by Rep. Ernie Caproni.

Caproni said helicopter facilities would be the first in the world on the roof of a steamship pier and asserted that "if Boston is to keep up with the times, it must look to the future and take advantage of its harbor and new developments in aeronautics." The bill calls for state construction and maintenance of the piers.

## Human Pickup at Cruising Speed Found Practicable in ATSC Tests

System developed from All American's airmail and cargo pickup; expect to extend experiments to cargo and fighter planes.

Human Pickup—Lifting a human being off the ground and into an airplane while the plane is flying at normal cruising speed—has been proved practicable in demonstration flights by the Air Technical Service Command at Wright Field and Clinton County Air Base, Ohio, the War Department has announced. The man to be picked up, on Sept. 5, 1942, was First Lt. Alex. Doster, a paratrooper. Officers who have shared the experience are Staff Sgt. Harry C. Conway, Wright Field, Capt. John W. Ward, Clinton County Air Base, and Capt. Constantine Stelakos. Pickup pilots have been Capt. Norman Barford, experienced airmail pickup pilot, and Lieut. Norman S. Benedict.

Lieutenant Doster died, in Egypt, of infantile paralysis, a few months after the initial pickup. However, army medical authorities after a complete investigation reported that his death was in no way connected with his pickup experience.

The human pickup system has been developed from All American Aviator's airmail and cargo pickup system, which also was responsible for the glider pickup system now widely used by the AAF.

In preliminary tests using a Stinson Wilcox pickup plane, weighed down and cut down, and cut down from the ground, instructors showed successful figures of 10 to 17.0, and the controllers had the ground crewing to precise improved pickup rope and harness cut the acceleration force to from 4.25 to 7.15 G's, a minimum.

During the plane at a 25 degree angle as soon as the contact was made, eliminated the danger of lifting the ground. A total of 158 pickups were made, on harness, dummies and live sheep, before the Doster pickup. The sheep was selected because of its general weak anatomy. If the apparatus could lift it alive, it was relatively safe for humans. The sheep was struggled to death when the harness twisted but changes were made which resulted in successful pickups on the other sheep, with no harmful effects.

Doster wore a standard parachute harness, with additional leg

support straps and veenranged crotch straps over a winter flying suit, a French type chest harness, goggles, with telescopic lens, lightweight chest parachute, and carried a heavy knife. If the reel in mechanism should fail, he could cut himself free and drop by parachute. The pickup functioned smoothly, as the pickup boom swung down, hooked the loop to which Doster was attached, and swept him up into the sky. He reported that his only difficulty was in climbing the last few feet into the plane, because of the proper backwash. Medical examiners said he suffered no ill effects.

Following the first human pickup, 39 other pickups, including 35 human pickups have been made in the Wright Field tests. The trials have resulted in modification of the harness, to equip the subject with a back type parachute. In the last pickup, October

7, the harness was worn loosely enough for the subject to put it on himself. The only helmet was discarded, and ordinary summer overalls are regarded as sufficient clothing. Proportion of the nylon rope has been changed, the pickup stand has been altered and a C-44 Noorduyn Norseman is used as the plane. An experienced crew may rig a C-44 in two hours, for pickup without drilling holes or making permanent installations.

The AAF expects to continue the experiments using faster cargo planes, and eventually a fighter plane.

Engineering data indicate that the speed of pickup may be increased to 135 mph without seriously affecting the subject, since at that speed he would be subject to a force of 10 G for a very brief period, not long enough to cause shock. Tests at the 130 mph speed indicate a force of 7 G for a duration of one to one and one-half seconds after which the braking system on the drum in the plane, drops the force to 3.7 and as soon as the subject's body accelerates to a speed constant with that of the plane, the force drops still further to 1.3.

An eye-witness reports that the



Photos Show Human Pickup: Photos of the AAF's human pickup system show (above) Staff Sgt. Harry Conway, ATSC equipment laboratory technician at Wright Field, Dayton, Ohio, as the plane's towrope engages the pickup loop, lifting him off the ground, and (below) as he clings into the plane after the tow rope has been reeled in.



takes subject makes a vertical ascent abruptly of about 100 ft. in a few inches, and then plane attitude smoothly while the plane climbs steadily, until it slows to just above stalling speed. The subject hangs in a spin, perpendicular to the ground, as the plane makes loops and then the mechanism reels on his rope, and he is lifted into the plane. It takes two minutes and 45 seconds from the time he leaves the ground until he is inside the plane.

Lieutenant Benedict reports that there is a different "feel" when the plane picks up a human, than when a cargo container or a drop is lifted, because the human body is more streamlined and flexible.

"The first time I picked up a human I was frightened. I thought something had gone wrong because I had to receive the same kind of jolt," he said.

The War Department announcement confirms a story in the Oct. 22 issue of AVIATION NEWS, in which it was reported that use of human parachuting devices was the result of developments carried on in this country for more than a year.

## Airways Engineering Corp. is Formed

Organization of Airways Engineering Corp., with headquarters in Washington, to assist municipalities and others in preparation of airport plans and design, has been announced by B. C. Phillips, Jr., president.

General manager for the new group, with offices at 1611 Pennsylvania Avenue N. W., Washington, 4, D. C., will be Elmer M. Hansen, until recently in charge of a government airport program in South America.

► **Associate**—Others associated in the operation are Lieut. Col. Harold E. Hartney, veteran aviation authority who has acted as consultant to many aviation companies and airlines; Jack Knight, assistant vice-president of United Air Lines and senior air carrier inspector of the Civil Aeronautics Administration; Fred W. Yountier, director of planning for the Maryland National Capital Park Planning Commission; Lieut. (jg.) Edward L. Skolman, formerly communications engineer for Eastern Air Lines, Pan American and American Export Airlines; John Bolen, designer of New York's famed West Side Express

Highway and many well known New York engineers; Herbert S. Walters, veteran government executive; and Harry L. Ryan, Jr., of the legal firm of Whiteford, Hart and Cunnady, which handles many major airline contracts.

## New Drive Delays NAWPC Dissolution

Council expected to continue operations in view of campaign for increased production of critical warplanes.

Any disposition among aircraft manufacturers to discontinue operation of the National Aircraft War Production Council has been postponed by the renewed drive for production of critical warplanes.

There have been some Council members who felt that the group had accomplished its major aims and that most production problems handled by the Council were well in hand, but it was the general opinion that the Council should continue to operate and to discontinue it at this time would be bad public relations practice, if nothing else.

► **Production Problems**—There are still production problems plaguing the industry, although not with the intensity of some months back. The materials shortage, which was a prime headache for a time and was believed to be thoroughly licked, has bobbed up again in the aluminum field and the West Coast industry has some serious housing problems.

Richard Palmer, secretary of the National Council, is slated to become president, succeeding Frank E. Harty, who resigned to join the Cerris de Puerto Mining Co. He has been serving the Council in South America.

### Plane Allowance

Legislation designed to give owners of aircraft by government personnel, by permitting them reimbursement for use of private planes similar to that which they now receive for use of private automobiles, will be introduced in the House recently and sent to the Senate. The measure was introduced by Rep. Charles D. Hays (D., Va.) who formerly was director of private planes after the war for business as well as government use.

a consulting capacity only since that time.

► **Election Approved**—Palmer's election as president has been approved by the Aircraft War Production Council, East Coast, and the West Coast Councils is expected to take similar action at its meeting Jan. 24.

New president of the East Coast group is Rex B. Beisel, general manager of Chance Vought Division of United Aircraft Corp. Beisel succeeds Alfred Marcher, president of Republic Aviation Corp. Guy W. Vaughan, president of Curtiss-Wright was elected vice-president of the East Coast council.

## ACCA Traffic Body Elects New Officers

New officers of the traffic committee of the Aeronautical Chamber of Commerce were elected recently during joint sessions with the Canadian Air Traffic Committee.

Ralph Howard, of Bonita Philadelphia Division, was elected general chairman, succeeding F. C. Hickory, of Curtiss-Wright, Buffalo; Elmer Dunn, of Bell, was named vice-chairman, Richard Douglas, of Pratt & Whitney, chairman of the rule and classification committee; J. M. Hubert, Curtiss-Wright Propeller Division, chairman of the engineering and loading committee, and Sam Abley, of Curtiss-Wright, chairman of the export committee.

► **Canadian Committee**—Blair Lowe, Federal Aircraft Ltd., Montreal, was reelected chairman of the Canadian Air Traffic Committee; Harry Webster, Canadian Ltd. Montreal, vice-chairman, and J. D. Sutherland, de Havilland Aircraft Ltd., Toronto, secretary-treasurer.

## Ask Share in Bases

There is a definite disposition in Congress that the United States should at least share in the worldwide system of landing fields which military engineers have built in foreign countries.

The answer to what has been asked or what will be done with American-constructed airports will be sought by members of the Senate War Investigating Committee en route overseas.

► **Head Manoeuvre**—Senator Mead (D.-N.Y.), chairman of the committee, is a maneuver to provide

the State Department with ammunition in future discussion of world aviation rights, and that "we particularly want the State Department to have a strong attitude to that line-up of airports from Washington to Cairo when it goes into conference to determine landing rights all over the world."

## CAP Headquarters At Camp Springs

A Civilian Air Force headquarters, responsible for the air defense of the United States, and organization, re-organization and training of Army Air Force service and combat units and crews, has been established at the huge Camp Springs Army Air Base, eleven miles from Washington. Headquarters, CAP, will exercise command functions over the four air forces in this country and the First Transport Carrier Command. It also is charged with responsibility for joint air-ground training.

Creation of the new headquarters covers operating elements from headquarters of the elements of higher-level policies and planning. While in its formative stage, AAF sources say, the new headquarters organization will be staffed by personnel now assigned to AAF headquarters. It will be commanded, as an acting station, by Brig. Gen. Eugene E. Hoebbe, who until recently had been senior American air officer on the staff of Lord Louis Mountbatten in the China-Burma-India theater.

## K. E. Benson Named Sales Engineer

Communications Co., Inc., Cornel Gables, and Rex Beisel, Inc., Ft. Lauderdale, Fla., have announced appointment of Kenneth E. Benson, chairman of the aviation committee of the U. S. Junior Chamber of Commerce, as sales engineer for the two firms. Benson, who has been actively concerned with aviation since 1929 and is a private pilot, will visit various parts of the aviation industry to find out what is wanted in the way of post-war radio equipment. Both companies have been manufacturing war equipment for the last three years, but expect to begin production of their government contracts soon and resume production of civilian

equipment for organizations with necessary permits.

Rex Beisel, Inc., is introducing a new line of compact light-weight radio equipment for the personal plane, while Communications company will return to production of equipment for airlines and control towers, and will introduce a new line of aircraft transmitters and receivers designed for small feeder line planes.

## New Rules Bolster Hiring Regulations

New regulations issued by the War Production Board are expected to strengthen the War Relocation Commission's employment ceilings and hiring regulations, since they authorize the withdrawal or modification of material priorities or allocations when the WPB determines that materials or facilities are not being used most effectively as a result of failure to comply with war manpower program.

► **Position Strengthened**—While the regulation does not alter basically the program for staffing urgent

war plants, it does mean that the WPMC position is strengthened in enforcing ceilings and hiring regulations wherever they are disregarded.

It also means the field staff of the WPMC can now make more extensive use of the type of ceiling program designed to obtain from less essential firms the specific types of workers urgently needed for war production.

## Named to Ala. Body

Calvin H. Bryan, head of the aeronautical engineering department, University of Alabama, Tuscaloosa, and Robert O. Pitts, head of the aeronautical engineering department of Auburn University, Auburn, have been named to membership on the Alabama Aviation Commission, succeeding G. M. Barney, Mobile, and J. B. Carl, Tuscaloosa, who have resigned. Board members of the commission are W. Haydon Brooks, Birmingham, chairman; Frank W. Hiles, Decatur, and Harold F. Wood, Birmingham, E. W. Stanford continues as director of aeronautics.



**BLACK WIDOW'S TURRET:**

Specially designed turret, which provides most of the fighting power of Mustang's Black Widow P-61 night fighter, is shown being lowered in the open position. Four 50-caliber guns will be installed in the openings which can be seen in the revolving drum at the top after the main mechanism is in place.

## Aviation to Face Crucial Problem With Meeting of 44 Legislatures

Vast middle of overlapping and conflicting state and federal regulations possible unless some uniformity of measures can be achieved.

By ALEXANDER McSURELY

On action of 44 state legislatures meeting this month and next hinges one of the most crucial problems of post-war civil aviation—whether it shall be regulated by an overlapping and conflicting state and federal regulations which are expected to strangle immediate growth of non-scheduled and scheduled flying, or whether a uniformity of state aviation regulations will be achieved, consistent with and complementary to federal regulation.

Seriousness of the effect of conflicting state regulations on aviation's future was a primary cause for introduction of the ill-fated Lee Bill in Congress, over a year ago. Main event at the First National Aviation Clinic in Oklahoma City in 1943, was a cut-and-throat fight between representatives of state governments, who wanted some say in aviation regulation, and airline representatives who sought close endorsement of the Lee Bill, which would place virtually all regulation in federal hands.

► **New Organization**—Out of the scrap grew a new organization, the

Joint Civil Aviation Legislative Committee, representing virtually all interests in aviation except the airlines, who declined an invitation to come into the group. It is this committee, named by the Council of State Governments and the Civil Aeronautics Administration, that is responsible for three proposed uniform state aviation laws which are the combined product of some of the best existing state aviation legislation, revised by some of the best minds in federal and state aviation groups, to cover existing and eventual problems. Even representatives of airlines of the airlines which did not participate in drafting the legislation are agreed that the proposed laws, if adopted, will mean a new clarification of federal and state responsibility in aviation regulation with a clear-cut division of the part which local, state and federal governments shall play in the complete picture.

Civil Aeronautics Administrator T. E. Wright recently announced that the three proposed laws, if adopted, would set up state legislation consistent with federal laws

and would facilitate the coming airport program sponsored by CAA. Wright, however, turned a cold eye on another proposed state aeronautics bill, sponsored by the National Association of Railroad and Utility Commissioners, which he described as "objectionable." This bill would subject all air carriers, scheduled and non-scheduled, operating either over regular routes or on a charter basis, to regulation by state public utility commissions and Wright declared that its provisions would be "extremely burdensome to both interstate commerce and charter flying."

► **Three State Bills Supported**—The three proposed state aviation acts which apparently are receiving nearly unanimous endorsement among aviation people as the only logical way out of an otherwise hopeless entanglement of conflicting and overlapping local, state and federal aviation legislation, include a state aeronautics department act which would set up a governing body for aviation in each state, a uniform state airports act which would define duties and responsibilities of the state, city and county in developing and promoting airports, and a model state airport zoning act which would set up clearly defined principles protecting the airports against infringements on adjoining lands.

The aeronautics department act, probably most important of the three, sets up an aeronautics commission, empowers the state to require state registration of federal certificates issued to airlines and aircraft, and authorizes the commission to refuse to issue or to revoke registrations, if the aircraft or aircraft does not conform to federal

standards. Charges are limited to not more than \$1 for a certificate, and exceptions to the requirement include: non-residents of the state; aircraft owned by non-aeronautic, arm and aircraft licensed in a foreign country with which the U S has a reciprocal agreement; airlines and aircraft engaged in interstate commerce; student pilots; airlines operating military government-owned or foreign aircraft, and model aircraft operators. The act also:

- Empowers the state to license flight schools and to require state approval of airport development, and to license airports
- Permits aviation and engineering services without charge from the state to its political subdivisions
- Authorizes the state to assist as a dividend financially and act in their agents in airport programs
- Authorizes state investigation of accidents
- Authorizes the establishment and maintenance of state airports

Two principal features of the state airport act would authorize cities and counties to accept federal aid for airport construction or operate the state aeronautics commission as their agent to receive such aid, and would provide machinery to permit two or more cities, counties or other subdivisions, even those in adjoining states, to establish and operate a joint airport. Another provision would exempt land used as an airport by a municipality or county, from taxation by any other political subdivision.

### Market Problems

- These questions affecting the aircraft industry were put to the American Marketing Association by Allen Faxon of Curtis-Wright's research department:
- How large is the market for aircraft likely to be one year after the war, five years after the war, or 10 years after the war?
- How will does the product fit the perspective requirements of the market?
- What type or size of aircraft shall we begin designing now to meet the requirements of the market four or five years from now?
- What are the trends in aviation legislation, in surplus disposal, in international air development, and how do such trends affect the market position?



SNYDER'S ACCESSORIES DISPLAY CASE:

A complete outfit for displaying aviation supplies, instruments, and equipment, in seasonal cases, for sale or rental operators' these cases, now introduced by Snyder Aircraft Corp., Chicago, at the ADAMA-NASA St Louis meeting. The display of merchandise in attractive flights of airports, is another step away from the unkempt camps of pre-war days, which is expected to pay off in increased public acceptance of aviation, and in increased sales of parts and equipment.

The zoning act is the fifth revision made jointly by the National Institute of Municipal Law Officers working with CAA, and the CAA and NIMLO join in recommendations that the 13 states and the territory of Alaska, which have adopted laws modeled on earlier model zoning acts, amend them to conform to the revised act. Its main provisions authorize subdivisions to zone areas around airports, surrounding flight of buildings and natural objects, to protect approaches, effective both for public and for privately-owned airports used by the public, eliminates some controversial features of earlier acts including one provision which had authorized a subdivision to zone land outside its own limits, and sets forth a policy that court decisions against airport zoning ordinances, as they affect specific pieces of property, shall not apply to the regulation as it affects other parcels of land.

► **Fourth in Preparation**—The three laws and a fourth not yet completed, but soon to be offered, which define inhibition of pilots, carriers, etc., all follow a broad policy that the federal government has a major responsibility for airworthiness of planes and competency of pilots and for the broad, overall airport program. The states will under the federal government by assuming responsibility for airport layout and regulation and governing air movements within the state boundaries.

Credited with a major share in development of these proposed laws are William Green, deputy attorney general, State of Minnesota; Maj. Sheldon B. Stoen, Michigan aeronautics director and president of the National Association of State Aviation Officials; Leslie Schroeder, Minnesota aeronautics director; William L. Anderson, Pennsylvania aeronautics director; Arthur Tully, Massachusetts aeronautics director; Frank Kane and Hubert E. Gallagher of the Council of State Governments.



AIRPLANE SALESROOM FOR ST. LOUIS:

Site for the alone personal plane showroom has been purchased on Kingshighway, one of the principal St. Louis thoroughfares, and construction will start as soon as materials are available for the \$75,000 structure. E. H. Westendorp and Robert A. Bouschard will operate the showroom in conjunction with the St.

Charles airport, near St. Louis. Complete planes will be displayed in showroom windows, and the establishment also will include a parts department for servicing planes. Part of the building also will be occupied by an electrical company operated by Bouschard.



## Ask Standardization Of Lightplane Parts

Geating urges massaction in ACCA's Personal Aircraft Council to study advancement of proposal.

Standardization of small parts and certain sub-assemblies for personal aircraft, which can be effected without the danger of freezing designs, is being advocated among the manufacturers interested in personal plane production.

Joseph T. Geating, Jr., chairman of the Personal Aircraft Council of the Aeronautical Chamber of Commerce recently recommended to manufacturers who belong to PAC that the subject of standardization be given most serious consideration as to policy by management and as to economic details by the engineers.

**►Military Parts Standardized**—Seventeen of the 34 members of the National Aircraft Standards Committee, most of whose work thus far has been confined to standardization of parts having to do with military equipment for which Army-Navy specifications are the basis of procurement.

With a return to commercial

business, Geating points out, the manufacturers of personal aircraft will be the customers, buying engines, propellers, components and accessories from a large group of vendors, and it is essential to the reduction of cost of personal aircraft to have as large a degree of parts standardization as is consistent with a sign of originality of design.

At a recent meeting of the NASC executive board it was agreed that there was sound basis for forming a sub-committee under the NASC to devote its attention entirely to light aircraft standards. The sub-committee would follow the operating procedure already used by NASC, of designating individual companies to investigate particular subjects and coordinate industry opinion on them, reporting results to the executive board. The procedure also permits any company to originate a project and carry it out, if other member companies are interested. It has been found that proposed subjects of standardization are well "filtered" before final selection—eliminating a number of unimportant or undesirable items.

**►New Committee Suggested**—Geating has recommended that the ten members of the council, who

are not now members of the NASC, through their engineering department request membership so that a light aircraft standards sub-committee can be organized, and a meeting held to determine what standardization projects should be undertaken.

PAC member companies now holding memberships in the NASC include: Beech, Bell, Boeing, Cessna, Consolidated-Vulcan, Douglas, Fairchild, Heston, G. A. A. Aircraft, Ingersoll, Klett, Lockheed, Martin, McDonnell, Republic, Ryan and Taylorcraft.

PAC members not now holding membership in NASC include: Aerovox, Bellanca, Culver, General, Globe, Luscombe, Meyer, Northwestern Aeronautical, Piper and Waco.

## Gas Allotments Cut

Reduction in size of aviation gasoline rationing checks issued by CAA to retailers for the first three months of 1945 is designed to bring allotments for private flying in line with actual consumption, preventing accumulation of surpluses which might be diverted to automobiles, according to CAA representatives.

Reports now being received on

the actual amounts of gasoline sold by retailers during the first two months the CAA-controlled rationing plan has been in operation indicate that in many cases consumption has been far below the allotments. A total of 4,246,000 gallons was allowed for the first two months. CAA is requiring that dealers turn in their surplus coupons to the rationing banks.

One extreme case illustrating the situation was that of a retailer who had been allotted coupons for 20,900 gallons of gasoline, and who actually used only 600 gallons in November.

## Plane Survey Asks AOPA Preferences

Members' choice of four types of aircraft, horsepower, speed and equipment sought in latest survey of post-war demand.

Unusual significance attaches to surveys now being tabulated by the Aircraft Owners and Pilots Association, as a result of questionnaires sent out to members of the association on their preferences for post-war planes, aircraft instruments and aviation insurance requirements.

While a large number of surveys already have been made among potential post-war airplane customers, with widely varying results, the AOPA tabulations may be expected to approach actual results in the post-war era a little closer than most of the others, because each AOPA member is a pilot, and presumably better informed on aviation than many of the respondents to previous surveys.

**►Four Plane Types Listed**—The post-war plane inquiry, sponsored by a manufacturer, who is paying expenses of its circulation and tabulation, lists four types of planes, specifying engine horsepower, cruising speed, equipment, capacity, price and operating cost of each, and asks the AOPA members to state what additional equipment and performance they would like for each ship, and which type they intend to buy, post-war. Types listed are:

- A two-place tandem, with 65 hp engine, price \$1,250, cruising speed 45 mph, operating cost \$7 per hour.
- A two-place side-by-side, all-metal, plane, retractable landing gear, 90 hp engine, price \$2,000,



## FLYING MISSIONARY

The Rev. Paul C. Hartford, Pontiac, Mich., returned to this country recently after a missionary trip to the Aerovox field plant, of several thousand miles into some of the most rugged regions of Mexico. His experiences included flying the plane over a 10,000 foot mountain, and having several holes shot in the plane by hostile Indians. He reached territory in a few minutes of flight on several occasions which would have taken days of travel by foot or pack-train, he reported.

cruising speed 130 mph, operating cost \$6.75 per hour.

► Cross-country family type plane carrying three-to-four persons plus baggage and 60 gallons of fuel, conventional fixed landing gear, radio optional, price \$5,000, cruising speed 120 mph, operating cost \$11.25 per hour.

► Three-place amphibian, all-metal, 175 hp, pumpster engine, retractable landing gear, radio optional, price \$5,500, cruising speed 135 mph, operating cost \$12.

Operating costs are based on 150 hours of operation annually, and include depreciation, insurance, larger rental and direct operating expense.

Survey on instruments asks AOPA members what kind of instruments they want in their post-war planes, asks their judgment on various aspects of existing and proposed instruments and their opinion on the price they should pay for the instruments.

Survey on aviation insurance

asks how much insurance should be required and seeks to set insurance costs on a new basis.

Results of the tabulations are expected to be announced within a few weeks, as soon as answers are in and results compiled.

## Instructor Rating Held by Pilot, 18

Instructors at Embury-Riddle School of Aviation, Maitland, Fla., believe Phil C. Gallagher, 18, is probably the youngest pilot in the country with commercial license, plus instructor and instrument ratings.

While still in high school, he earned the money for his flying lessons by playing the drums in a night club orchestra, and took flight and ground school training before and after school hours and during vacations.

**►Has 300 Hours**—He now has more than 300 hours in the air, but was required to wait until he became 18 before he could receive his license. He took his first 100 hours of flight training at Embury-Riddle's schoolhouse bus on MacArthur Causeway, later going to Chapman field for land rating, and received his license and ratings there.

His parents refused to permit him to work and fly unless he



## HAWTHORNE OFFICIALS

Officials of Hawthorne Flight Operations, one of the largest "share" fixed base operations in the south, are shown above left to right: back row, Charles Howard, vice-president; A. W. Greenes, Jr., Greenesboro, N. C.; W. H. Baldwin, treasurer, Orangeburg, S. C.; Ted Gossawyer, sales training director, Beverly F. Howard, president, Richard G. Penson, controller, J. A. Ingles, insurance consultant; Edward N. Hooton, Greenesboro base manager; Walter P. Rogers, vice-

president; Joseph J. Mitchner, Northville Airway manager; front row, Ralph C. Crocker, airframe manager; Page Waukester, Columbia maintenance superintendent; Sam R. Montlake, general superintendent of maintenance; Lee Bone, Rocky Mount, N. C., base manager; William D. Strahmeyer, public relations director; M. Berley Kittered, area supply manager; and Claude Reinhardt, Columbia flight director.



## COMFORTS OF HOME

Owner of Republic flightplace Amphibian, agreed to reveal for \$2356, shows a luxury of fittings several steps removed from the meager comforts of pre-war pudginess. Marketing experts believe most post-war plane pilots gain acceptance as much on their styling and comforts, as on the advanced engineering of their fundamental designs.

maintained a "B" average in his high school work, so he studied between dances at night, and at the airport in the daytime. He was graduated from Miami Beach high school last June. He is now a flight instructor, in daylight hours, but continues to play the drums with an orchestra in the evenings.

## PT-19 Workers Get Chance to Fly One

Employees of Fairchild Aircraft Division at Hagerstown, Md., are getting a chance to do some flying in their spare time in a Fairchild PT-19 primary trainer, after having turned out over 3,000 of these planes for the AAF. Company officials recently bought a surplus PT-19 from the Defense Plant Corp. and are making it available to employees at Hagerstown municipal airport.

Flying time may be purchased at cost by all Fairchild, Army or civil service personnel, regularly assigned at the Fairchild plants. A local operator maintains the plane and provides instructions. The plan went into effect late in November and has been received enthusiastically by employees because of the long-out flying time, and by the company, because of the stimulation of interest in private flying among its employees.



### NATA LEADERSHIP:

Col. Rayner Turner, Indianapolis, was re-elected president of National Aeronautics Trades Association at the St. Louis meeting. Officers and district governors above, left to right are: Secord E. Hazzard, Orangeburg, S. C., first vice-president; President Turner; and Howard T. Adler, New York, district governor, standing. District Governors: Clarence W. Ludwig, Tampa, Fla.; Arthur R. Curran, Galesburg, Ill.; F. C. Anderson, Des Moines, Iowa; Mac Anderson, Stillersburg, Wash. Missing from picture, Norman Larson, Fresno, Calif., second vice-president, and District Governors John H. Burke, Delhousie City, and John Schaeffer, Redwood, Calif.

## Briefing

### For Private Flyers and Non-Scheduled Aviation.

Development of a compact cabinet containing the equipment necessary to determine the brightness of contact lights outlining runways of an airport, is announced by Westinghouse. Different light intensities are required for low visibility, dark and dark night, and selector permits five degrees of intensity, 1, 3, 10, 30 and 100 percent of full intensity. The cabinet, five by two by four feet contains all equipment, and needs only to be connected with existing, outgoing and control cable connections, to govern the light intensities on four runways.

► **Credits Change**—John W. Lanter, president of Lanter-Kaufmann Aircraft Corp., St. Louis, writes to credit the Soaring Society of America and the Southern California Soaring Association, for first development of the "Thermal Soarer" reported in this column in the Dec. 11 issue, and mistakenly credited to his company. Robert Symcox of Bishop, Calif., was largely responsible for the device's first use in a scientific manner last July. Howard Bloomer, of Lanter-Kaufmann, is developing improvements of the device and study in possibilities of other

instruments designed to do the same job—aid a glider pilot in finding warm up-currents—but based on a different principle. The soarer, as previously reported, uses thermo-couples in the glider's wings, to indicate on a dial in the cockpit, which way is warmer, so that the pilot may turn his plane in that direction to seek an up-draft.

► **Skills Added**—Two flight operators at South Municipal Airport, Ft. Wayne, recently added skills to their flight equipment, for the first time, after a 10-inch blanket of snow prevented use of their training planes with conventional wheel landing gear. The operators are Interstate Flying Service and the Purdue Flying Service.

► **Canada's Air Cadets**—Plans to continue the Air Cadet League of Canada, formed as a wartime successor of recruits for the Royal Canadian Air Force, at present time, have been announced. Arrangements to enable the cadets, of high school age, to receive dual flight instruction in the final stages of training, and to provide supplementary in-flight and aircraft training for cadets, are being made. Post-war training will prepare cadets for preferential treatment as recruits for the RCAF reserve. There are now 179 cadet squadrons, with 21,000 members.

► **Statistics on Demonstration**—John B. Randolph, manager of Lambert-St. Louis airport, director of the recent airport demonstration at Forest Park, St. Louis, reports that the takeoff and landing of eleven planes was done in 14 minutes, and that if the demonstration had been rehearsed it could have been done in six minutes. The one-way strip, 1,550 feet by 160 feet, with 25-30 foot trees at both ends, was subject to cross-winds of 20-30 mph. in gusts but despite this, none of the planes landed in as short a space as 160 feet and nobody used more than a quarter of the available runway.

► **Advantages and Disadvantages**—As well as demonstrating the advantages of Airplane and personal flying, the St. Louis demonstration was a discouraging exhibit of the weather handicap. The demonstration was postponed for four days, until flyable weather came. The experienced aviators, the contention of many conservative prognosticators that personal flying with real utility, will not be forthcoming until American ingenuity does something about the weather handicap—A. McE.



## ...counts on Curtiss Commandos

FOR MORE FREQUENT AND FASTER SERVICE

As part of a \$25,000,000 domestic and international expansion program—that will multiply its mileage by five times in a three-year period and by approximately ten times in five years—Eastern Air Lines is adding the Curtiss Commando, world's largest and fastest twin-engine transport, to its Great Silver Fleet.

This selection was the result of Eastern's two-year experience, operating a fleet of Commandos for Air Transport Command as regular schedule Under ATC direction. Eastern Air Lines plans five Commandos more than ten million miles, largely over water to South America and Africa.

Originally developed by Corbin Wright in cooperation with airline engineers as a

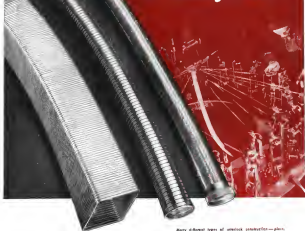
commercial transport, the Commando with its powerful 16 cylinder Wright Cyclone Engines boasts a definite demand for larger payload, greater reliability and reduced operating costs on flights up to 700 miles in length—a range that covers over 90% of all domestic air travel. Look to the St. Louis Curtiss Wright Corporation, Airplane Division, Buffalo, New York.

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Engine: Six cylinders, 1400 cu. in. Piston and Valve: 17 cu. in. Displacement: 1600 cu. in.

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Manufactured from a combination strip of metal, Breeze Flexible Tubing and Conduit can be stretched out to length, with necessary end fittings for any conduit installation.

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## THE AIR WAR

### COMMENTARY

## New Jap Fighter, Bomber Models To Make First Appearance in 1945

Reduction of American technical advantage in aviation over Nipponese to be increasingly important factor as pace of Pacific war is stepped up this year.

As the war against Japan shifts into top gear for 1945, the question of the capabilities of the Japanese Imperial Air Force (Army) and Naval Air Service becomes of the highest importance. Air Power spearheaded the lightning conquests of 1942, and air power will put up its steepest battles as the fight is brought closer to the inner empire line—Formosa—Ryukyu—Japan.

A comparison of recent statements by these Naval authorities is full of interest on this point. First of all, Secretary Foranell went further than his statement of last summer ("we do not now have as great technical advantages over the enemy as a year ago") by saying that we now have only a "slight technical superiority" over Japanese aircraft.

A few days later, Vice Admiral Mitscher, back from his sweeping outlooks as commander of Task Force 58 (part of Admiral Spruance's Fifth Fleet) and more recently a fast carrier Task Force in Admiral Nimitz's Third Fleet, revealed that Navy types had shot down 4,900 Jap Navy planes during the last year and a half, and that "our material is much better in every way." More recently still, Rear Admiral Ramsey, chief of the Bureau of Aeronautics, stated that during the past four years, top speeds of Navy fighters had been stepped up approximately 100 mph, and torpedo bombers 70 mph, that ranges of fighters have been newly doubled and increased more than tripled including 30-mm cannon and rockets. He further indicated that in the near future the top speeds of fighter aircraft will approach the sonic range.

Foranell's statement analyzed—Informed sources in Washington have taken Secretary Foranell's

statement to apply to the many brand new Japanese fighters and bombers just coming into action and not yet seen in considerable numbers. Evidence for these new warplanes include an 16-cylinder radial of 1800 hp in full production and another of 2000 hp in limited production, these are top ratings with water injection (water and methanol). Higher ratings are in sight with the development of a 2-stage 3-speed supercharger, also expected to be in operation on at least one new fighter. Armament is much heavier, including 30-mm, 20-mm and 37-mm cannon, with heavier armor plate and bullet-resistant glass in some models.

Mitscher's Opinion — On the other hand, Mitscher's statement obviously concerns the past and immediate present. When realistic reports of the heavy Jap airplane losses it is important to know what actual models are being encountered. In the Philippines, both Army and Navy three-engine types are met with Naval types predominant. The fighters include Zerk 32, Zerk 32 (formerly Henry), Type 1, Type 2 and Type 3 (340 to 380 mph class), and the bombers Nell 33, Nell 33, Nell 33 and 22, and the dive bomber Val and most of these are on the way out.

Since the battle for Saipan seems "the new fighters, Jack 12 (Randall, or "Thunderbolt"), George 11 (Shiden, or "Lightning"), Frank 1 (fastest of all to date) and the twin-engine night fighter Jerry 11 (Griffin, or "Hoodlum") have been encountered, also the new single engine bombers Jill 12 July 12 (Suzuki or "Cameo"), and the very fast reconnaissance bomber Muri 11 (Suzuki or "Piedmont Cloud") and the twin engine bomber Frances 11 (Griffin or

"Mickey Way," one of the fastest of its class in the world, with excellent range). It is hardly likely that the Admiral's remarks applied to these newest models.

Ramsey Looks Forward—By and large, Admiral Ramsey's published remarks from his top-year review before the House Naval Affairs Committee looked into the future, when 600-mph (and higher) jet-propelled "squirt jets" would be in operation, with a newer view considering the Grumman F7F twin-engine night fighter (Tiger Cat) and the improved Helios (now flying, some not armed) and the growing Sea Wolf (TUT-1, Consolidated Vulture) torpedo bomber as in action.

AAF Models—General Kenney, commander of the Far Eastern Air Forces (5th and 13th, plus units of 3AAF, 20AAF and 22AF), has recently noted the superiority of AAF fighters and bombers over current enemy types as evidenced by heavy Jap losses. His point of view has Admiral Ramsey's, based on an honest and realistic appraisal of two years of air operations. Just as the Helios and Corsair clearly outshined the 1940-44 Jap Navy fighters as the Lightning Thunderbolt and Mustang shot the Army fighters Oscar, Tigra and Togo out of the skies in large numbers, as well as Navy Zerk and all types of Jap bombers. The new Army models, especially Frank 1 with its speed of well over 400 mph, and fast climb, will tend to narrow this margin of superiority.

New Fighters and the B-29's—The new Jap fighters, both Army and Navy design, are beginning to appear. The Superfortresses a better run for their money by getting up faster, faster with greater firepower. As in the case of the 48 offensive against Guadalcanal, 1942, the B-29's will probably have to be developed.

It is too early to determine what effect the B-29 attacks on the Jap aircraft and engine factories will have on the ability of the enemy to replace current aircraft with the new and improved models, but our air leaders have expressed a hope that in the long run these attacks may prove to be an important factor in the ability of the enemy to replace current aircraft. (A comparative list of the latest Japanese warplanes and U. S. Army and Navy opposite numbers, with approximate performance figures, will be included in a forthcoming issue of AVIATION NEWS.)

NATHANSON

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world, a \$90,000,000 investment in new refining facilities and equipment, \$2,000,000 in research during the past two years alone.

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## Plane Schedule Increases Stress Heavy Bombers, Navy Fighters

1945 production figures raised by 2,617 aircraft to 78,327, Krug discloses; some new types play important role in revisions.

Aircraft production schedules are on their way up again after several months of leveling off, with heavy bombers, Navy planes—particularly fighters—and some new types figuring prominently in the revisions.

The 1945 total figures have been raised by 2,617 planes to 78,327 for the year, according to J. A. Krug, chairman. At the same time, Rear Admiral Dwight C. Harney, chief of the Navy's Bureau of Aeronautics, said a 39 to 40 per cent increase in Navy fighter plane production might be necessary in 1945.

**New Phase in Pacific**—He commented that we are approaching a new phase in the Pacific war and

that because of the change in geography, change in enemy tactics and because we are getting closer to Japan proper and the centers of enemy shore-based aircraft we will need more fighters to cope with the new situation.

Before these developments, it had appeared that recent revisions of military aircraft production schedules would have the double effect of gradually reducing the monthly volume of output during 1945 and decreasing the amount of the setback on V-E Day.

It appeared, too, that the gap was closing between production schedules in total, which ignore the occurrence of the end of the European phase of the war, and

those schedules which were based on an assumed date of Germany's defeat.

**New Conversion Problems**—Until the recent German offensive, the assumed date of Germany's defeat had been considerably narrowed compared with production plans laid out last summer. Now, in connection with military developments and the drive for increased production of aircraft and other critical items, cut-backs in production are likely to be more severe and conversion problems multiplied.

Last August, forward production schedules called for V-E Day objectives to a level of \$1.10 billion per month during the second quarter of 1945, and an average of \$1.13 billion per month in the third quarter on the assumption that Germany would be defeated around Jan. 1.

August production was \$1.33 billion in value. According to some revised schedule estimates, the industry will be called upon to produce at above the \$1.25 billion per month through 1945, regardless of when Germany is defeated.

## 30-Place 'Copter Predicted with JP

Jet propulsion will permit the building of helicopters much larger than helicopters contemplated in the vision of Igor Sikorsky.

Georgia Tech experiments with jet helicopters were recently revealed, and this is Sikorsky's first public comment on the possibility of this type of propulsion in a rotary craft.

He expects, he told a recent dinner meeting during Michigan Aviation Week that from 30- to 20-passenger helicopters will be produced in the immediate post-war period and rotary winged craft for 49 passengers will come within 10 years.

L. M. Ecker, president of United Aircraft Corp., parent company of the Sikorsky division which designed and built the helicopter now being used by the Army Air Forces, disclosed at the dinner that "preliminary efforts" will be toward mass production for five- or six-place helicopters to be used in connection with land or feeder service from airports, bus terminals and railroad stations.

**108 Used by AAF**—Col. Frank H. Gregory, who is in charge of rotary wing development for the Air Technical Service Command,

THEY BOTH WEIGH 200

BUT WHAT  
A DIFFERENCE!



To clothe these two men properly requires the expert touch of a custom tailor. In the same manner, to properly shock-mount airborne radio or electronic equipment also calls for individual treatment. A custom-built shock-mount must be used if effective operation is expected.

Robinson engineers have developed a new method of vibration control based on the exclusive double neutral arm principle. It is called Vibrahock®.

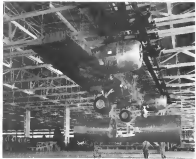
Every new problem of vibration control submitted to Robinson engineers is thoroughly studied. Then, a complete, fully engineered structure is built. With each structure there is a guarantee that over 50% of all vibration throughout the entire operating range of the aircraft will be absorbed. More than 75,000 Robinson built Vibrahock Suspension, of various types, are now in use with the Armed Forces.

Makers and users of electronic and radio equipment, flight instruments, and in fact, any airborne equipment that is subject to shock and vibration, are invited to submit their problems to Robinson engineers.

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## B-29 CENTER WING SECTION FITTED TO FUSELAGE

Complete test dual wheels of the main landing gear and two of the four Wright 2200 hp engines, the 17-ton main center wing section of a Boeing B-29 Superfortress is lowered to join the fuselage bomb bay section in the accelerated production program at the Wichita division of Boeing. With the two units manufactured for a perfect fit, it is necessary to joggle the center of the bomb bay section to allow a quarter of an inch tolerance spread as the two sections are mated.

## New JP Engine

Westinghouse has disclosed that it is developing a jet propulsion engine for the Navy that has been entirely engineered in this country, and which is expected to yield more pounds of thrust for a given amount of fuel and less pounds of weight than any of the engines brought from Europe for study and then re-engineered for American production.

Navy research in jet development, not restricted to the Westinghouse project, has been as intensive as that of the Army Air Corps, although it has been less publicized.

revealed that more than 100 helicopters are now in use by the AAF throughout the world. Other Sikorsky helicopters have been turned over to the Coast Guard and to the British for training, experimentation and use.

One type, the R-6, was the first

helicopter produced on an assembly line basis at the Bridgeport plant of the Sikorsky Division. A second type, the R-6, is being produced by Nash-Kelvinator. Still a third, the R-3, is being built at Bridgeport. This last is the largest of the three, mounting a 450-hp engine.

George W. Mason, president of Nash-Kelvinator, said his company would withdraw from the helicopter field when military needs are met.

## Beech Test Plane Uses V-Type Tail

Experimental craft is modified AT-16, pilot report design has excellent control and stability characteristics at all speeds.

An experimental airplane without either horizontal or vertical tail surfaces has been built by Beech Aircraft at Wichita and is now being flown extensively.

The airplane is a modified AT-

16 Beechcraft plywood transitional trainer, converted to a flying test unit for various advanced ideas. It has a V tail with only two elements. A workman called it a "butterfly" tail, due to its resemblance to the built spread wings of a butterfly and the same shape.

**Simplified Structure**—Beech officials said their purpose in building this experimental unit was to investigate the possibilities of simplified structure, elimination of undesirable tangibility effects at high speeds, simplified controls, and the effect on control, stability and handling ease which may be offered by such a departure from conventional construction.

Beech test pilots report that the butterfly tail renders excellent control and stability characteristics at all speeds. Company engineers say that the only trick in the deal is to let the movable control surfaces know when to act as rudders and when to function as elevators and that flight tests are proof that this has been accomplished successfully.

## New Unit Controls Cabin Temperature

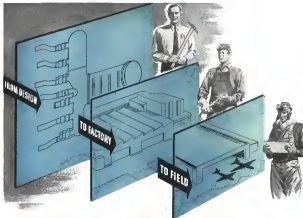
Minneapolis-Honeywell develops electronic regulator system for use on airlines as well as on Army transports.

Disclosure of a new electronic cabin temperature control system which has been in test service on several airlines and combat use on Army transport planes has been made by Minneapolis-Honeywell Regulator Co.

The new control system for heating is in a package and weighing slightly under eight pounds and is designed to hold automatically any cabin temperature selected by the pilot. The system is completely automatic.

**Automatic**—Connected to the master control switch in the cockpit, the new control system is automatically turned on when the pilot starts the engines. Unless heat is required immediately, the heating system remains inoperative until outside temperatures fall to a point requiring the addition of heat for passenger comfort. At this point, without any attention from the pilot, the system starts delivering heat to the cabin.

H. H. Whempner, chief field engineer for the company's Aero-



## RYAN ENGINEERING SKILL

IS ALWAYS AT YOUR SERVICE

Today the aircraft engine exhaust manifold is a highly complex and exacting system requiring technical skills of a high order for its efficient design and for production in quantity. In this field, the Ryan Aeronautical Company has been a pioneer. It was foremost in making the design and manufacture of exhaust systems a specialty in itself.

In engineering and producing Ryan Manifolds every effort is made to reduce maintenance problems to a minimum. But, regardless of the number in which any piece of aircraft equipment is designed or produced, educational assistance in the field is necessary. For Ryan Manifolds, in common with all technical products, achieve their greatest potential when the most precise knowledge of their functions and capabilities is known, appreciated and exploited.

To afford customers opportunity to get the full benefit from an exhaust manifold, Ryan's Manifold Service Department is staffed by specially trained personnel chosen from experts within the Ryan family.

These men, in addition to their "know-how" born of long experience, are imbued with the same desire for perfection in operation as their fellow workers in the factory are enthusiastic in attaining perfection in manufacture.

RELY ON RYAN TO BUILD WELL



DESIGNERS AND BUILDERS OF COMBATANT TYPE AIRPLANES AND EXHAUST MANIFOLD SYSTEMS



**Beech Develops New Butterfly Tail:** Two views of Beech Aircraft's experimental airplane which has neither horizontal nor vertical tail surfaces, substituting a V tail with only two elements. It is a modified AT-16 Beechcraft plywood transitional trainer.





## PERSONNEL

**William J. Bray** (photo) will become associated with ICA as executive assistant to Vice-President J. J. O'Donnovan, effective Jan. 1.



**Gen. Robert Johnson**, who was then vice-chairman of the War Production Board, and also head of Small War Plans Corp. Bray has held various administrative positions in private industry and for many years held executive responsibilities in the federal government.

**John E. Grabow**, formerly traveling auditor for United Air Lines, has been appointed manager of developments with headquarters at Chicago. **Gordon Wood**, who has been with United since 1935, has been named assistant general purchasing agent at the company's central maintenance base at Champaign, Wyo. **J. Kadis**, formerly assistant manager of general accounts at Chicago, will

succeed Wood as Shop Auditor in Champaign.

**Richard E. Gould**, manager of the War Products Training Service department at the Principal Division of General Motors, has been named chief engineer of the company's AeroProducts Division. Gould, who for the last 14 years has held engineering and executive positions at Ford, succeeded the late Charles S. J. MacNeil.

**Jack T. Bolton** has been appointed eastern district manager for the New York territory of Bendix Radio Division of Bendix Aviation Corp. in Baltimore, Md.



formerly was eastern sales manager for Crosby Radio Corp. and Grunby-General (Majority) radio companies. More recently he had been associated with RCA-Victor in special assignment work.



### RECORD WINNERS RECOGNIZED:

**Dr. Igor I. Sikorsky**, right, receives congratulations of late AAF pilots who shared honors with him when aviation records set by all three were recognized by the National Aeronautic Association at the recent Brewster Trophy dinner in Washington. The helicopter inventor received recognition for a world altitude record which he set in his first helicopter, while **Col. Clair Peterson**, center, and **Lieut. Col. Jack Carter**, left, won recognition for West-East transcontinental speed records which they made recently flying P-51 Mustang fighters.

**G. B. Berkow** has been appointed controller of Douglas Aircraft's El Segundo plant, following reorganization of the company's sub-divisions. The factory there is now handling its own accounting operations as a fully-integrated organization. Previously this work was done at Santa Monica.

Berkow became affiliated with the company in 1930 as general postmaster, continuing in that capacity until 1941. For the past three years, he has been in charge of policies and procedures for all plants at the Santa Monica controller's office.

**Lloyd K. Reichen**, who has been with Northwest Airlines since 1935, has been appointed system chief pilot for the company. Reichen succeeded **W. B. (Dad) Freidberg**, chief pilot for two years, who recently requested his release in order to return to flying on the IWA airline between Chicago, Milwaukee, the West Coast and the Pacific Northwest. Both pilots will be stationed at Wood-Chamberlain field, Twin Cities airport.

**Harmon A. Harris** (photo), of the New York Traffic Department of Panagra, has been appointed public relations and advertising manager for South America.



Some joining Panagra in 1935, he has acted as assistant to **Christopher C. Davis**, general traffic manager for North and South America. Prior to his affiliation with Panagra, Harris was in the publicity department of American Airlines, Inc. He will make his headquarters at Panagra's main South American office at Lima, Peru.

**Des. G. Benson**, who has directed some of Northwest Airlines' most important wartime technical operations, has been named superintendent of aircraft engineering for the airline. Working under Benson as supervisors in specific fields will be **Donald E. Fiedler**, supervisor of power plant engineering; **James A. Reichen**, airplane engineering; and **Howard L. Priest**, flight engineering.

**Carl E. Swanson**, formerly superintendent of communications for Northwest Airlines, has been appointed manager of communications and engineering in preparation for expansion of the company's commercial activities. Swanson received

**U. S. NAVY PV-1**

**U. S. Army B-29**

**U. S. Army B-17**

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# WHAT DOES AMERICA WANT?

In the course of that editorial, the thirty-first of a series, to state the urgent need for a clear declaration of American policy in world affairs.

Within the past few weeks there has been a widening conviction in this country that the determination of international arrangements cannot safely be put aside until victory has been won. For we have seen nations taken in Europe assembly without full consultation and agreement of the Allied powers, which may profoundly affect the design of the post-war world.

A declaration of American policy is needed, and it should be accompanied by a statement of our firm intention to exert full effort to procure its acceptance and enforcement. Explicitly, this does not mean that an American platform should be put forth as an ultimatum, which other nations must accept totally, or reject at the cost of leaving the United States withdrawn from collaborative participation in world agreements and organization. On the contrary, the first plank in such an American platform should be a firm commitment on our part to participate with our associate nations in building a general system of world security and order. By definition, this requires that each participant be willing to accommodate its purely national interests to a program that can be accepted as fairly representing the interests of all. But equally, there is imposed on each participant an obligation to state honestly and openly what it conceives its individual interest to be, as well as its concept of what measures will best serve the general interest.

Americans have displayed a singular diffidence in the matter of formulating a bill of American objectives—singular, in that it contrasts so sharply with our power to exercise as broad a leadership as we are able to define. This reluctance stems partly from the inherent difficulty of arriving at a coherent statement of national aims in a country like the United States—so vast in area, so multiple in its sectional and group interests, and so acutely committed to the free expansion of individual thought. But it stems also, in part, from a tradition of national isolation which, however understandable in historic perspective, now stands clearly discredited by two world wars which were not of our making, but from which we were unable to hold aloof.

That the economic wellbeing and political security of the rest of the world is closely bound to the decision and performance of the United States is questioned nowhere but in America. Political boundaries and restrictions can-

not build effective fences against the interplay of economic forces, and the sheer weight of American economic influence is of crucial import to all the other nations of this globe. In large measure their destinies will be shaped either in response to the opportunities that our producers offer them, or in defense of interests that our producers may jeopardize.

The United States contains only about 6 percent of the world's population. But—our national income, before the war, amounted to almost 25 percent of world income; our industrial output as a whole approximates 45 percent of world totals, and we now are producing a like percentage of the world's munitions; we have 35 percent of the world's railroad mileage, 35 percent of merchant fleet tonnage, 30 percent of the world's telephone, 45 percent of steel production, 40 percent of aluminum production, 35 percent of coal output; we are refining (though part of the production comes from imports) 45 percent of the world's copper, and 70 percent of its petroleum; we now are producing 90 percent of the world's rubber (though post-war resumption of natural rubber production will sharply reduce this balance); our share of agricultural production are, of course, much smaller, but just before the war we accounted for 35 percent of world cotton production, 15 percent of wheat, and 10 percent of wool.

Whether we like it or not, we must exercise political responsibilities commensurate with the weight of our economic power in an inter-dependent world. But before responsibilities can be assumed, they must be defined. On the United States strive at a clear agreement and statement of aims for which it is willing to stand sponsor?

The recent campaigns of both political parties have helped to provide an encouraging answer. In general, election promises are gloriously deficient as indicators of a unified national purpose. A majority of voters declare themselves for the winning candidate. But even among the majority there are varying degrees of enthusiasm for the platform principles espoused by their candidate, and the substantial minorities of the defeated parties may have had no enthusiasm whatsoever for particular planks in the winning platform, or for the platform in its entirety. A workable substitute for unified national conviction.

But this Presidential campaign was noteworthy for certain basic principles upon which both the platforms and the candidates of the major political parties were

united. Rarely, upon such areas of agreement there may be said to have been an American mandate, the more so, because upon certain of them, we have evidence that majority or candidate could have declared opposition with any hope of victory. What then were these agreed-upon principles? The following is an attempt at a fair summary:

1. That America, in collaboration with its Allies, is committed to assuring the way through to the unconditional surrender of our declared enemies.
2. That America is committed to a responsible role in a world security system after the war, including a commitment to lend the support of our armed forces to repel aggression that may violate such security.
3. That America is committed to the post-war goal of substantially maintaining in this country an economy that will provide jobs for those who are able and willing to work.
4. That America is committed to the principle of achieving this goal of sustained, high-level employment of manpower and economic resources under a system primarily activated by competitive enterprise.

These are American mandates. They can be made the nucleus of a coherent national policy, which they define aims upon which the great majority of our people are enthusiastically agreed. But no one can pretend that in this generalized form they serve as more than directional guides for either national legislation or international negotiation. The skeleton of aims must be clothed with the living flesh of agreed-upon means. Here we have no national mandates of comparable clarity, but it is patently clear that it is our compelling task to achieve them.

On our elected representatives in government rests the primary responsibility for formulating the specific programs required to implement national policies. Under our system of government, these representatives must consciously manifest in the form of mandates as to what the people want. Particularly during a period when so many urgent problems are being thrust not upon an international basis, this imposes a grave responsibility upon all sectors of our citizenry; for it requires them to think in terms of the welfare of our nation as a whole, to focus upon those points which offer possibilities for substantial agreement among Americans, rather than upon questions of individual, group, or sectional advantage.

In earlier columns I have tried to define a basis for national policy in language with that broad purpose. They have dealt with problems that are basic in the healthy functioning of free enterprise under the competitive system, with the mobilization of our resources for war and for reconversion to peace-time production, with labor and management responsibilities and relations, with national debt and taxation, with foreign trade and our economic relationships abroad, with the industrial development of backward areas. Since they have been presented in the McGraw-Hill publications, which reach a group broadly representative of all American industry, they have centered upon problems that have an economic rather than a strictly political import.

Future editorials, to appear during 1945, will deal with

comparable subjects selected in recognition of the urgent requirements for arriving at concerted definitions of national policy. It is fully aware that no individual or group can speak authoritatively for the American Nation. But I hope that as honest attempt to formulate sound concepts of national interest in crucial economic matters will help to crystallize American policy both by focusing agreement and by clarifying dissent.

Here there is space only to indicate in broad outline what I conceive to be desirable foundations for an economic policy for the United States:

1. The attainment of a high and sustained level of business activity and employment in the United States and in the world.
2. Active and expanding markets for world trade based upon fair competition rather than upon bloc agreements, discriminatory preferences, and cartel arrangements.
3. The encouragement of industrial development in nations that have been backward in that respect.
4. A recognition that hospitality to imports, rather than restricting a threat to national standards of living, offers in fact the most potent instrument for international harmonizing that any nation can command.
5. A willingness to assume a responsible national role in international arrangements designed to provide such financial stability as may be needed to support mutually advantageous world exchange of goods and services.

We must see to it that the end of military warfare does not merely open the door to an era of economic warfare. The fact is that America has no choice but to assume leadership in world affairs. For the weight of our influence will be felt by other nations no less whether our attitude be positive or negative. And the cost to us of any international obligation, which we might undertake must in all fairness be weighed against the equally real cost to us of dealing with nations that others may take to protect themselves against the results of our participation.

We have tended in the past to approach international commitments tentatively, fearful that we might be outwitted in a world battle of wits. And so we do, we have too often failed to others the initiative of suggestion, leaving to ourselves the thankless task of accepting or rejecting what they deemed of us.

Our one bargaining weakness stems from the fact that other nations, by contrast feeble as potential power, know what they want and are able to mobilize all their strength to achieve it.

America can be the most effective nation on earth—if only it knows what it wants.

*James H. McGraw, Jr.*

President McGraw-Hill Publishing Co., Inc.

## Tentative Articles for World ATA Put Airlines in Control of Body

Preliminary program drawn up in Washington discloses strong desire for close coordination with International Civil Aviation Organization for which plans were laid at Chicago.

By MERLIN MICKEL

Tentative articles for a proposed international air transport association, drawn in Washington by a special drafting committee, significantly place control of the world association directly in the hands of the airlines and demand a strong desire for close coordination with the International Civil Aviation Organization for which the foundation was laid at the 1944 Chicago conference.

Whether the control contemplated reflects the sentiment of all concerned probably will not be determined definitely before the initial meeting of the organization, planned for Havana the week of Aug. 16. It is a different approach from that by at least one important figure in the industry. Col. Edgar S. Gorrill, president of the Air Transport Association, had suggested that individual company participation could be effected through their membership in national or regional associations, with no airline to have membership in more than one such association.

**Airline Control Favored**—Industry sources say that government circles as well as many others, have no desire to see a world transport organization handled directly by any instrument except the airlines themselves.

As proposed by the drafting committee, on which the U. S., Britain, France, Sweden, Mexico, Cuba and Poland were represented, any air transport enterprise operating scheduled air service for passengers, mail or cargo between the territories of two or more states would be eligible to active membership, and other air transport enterprises to associate membership. A general requirement for members in either group would be that they operate under the flag of a state eligible to membership in the International Civil Aviation Organization.

The Association, under the by-laws drafted in Washington, might organize necessary traffic and rate conferences. Reaches of the head office would be established and regional groups of members set up to cope with local problems. The committee suggested that the association have its head office in the same city as the International Civil Aviation Organization Official Languages would be those used by the ICAO.

**Annual Meetings**—General meetings would be held annually, with a majority of active members constituting a quorum, of which a two-thirds vote would be necessary for action. Each active member would have one vote. Associate members would have no vote although they could participate in association activities in an advisory capacity in the final articles of Association.

This question of vote probably will provide a good bit of discussion at the Havana meeting, as it did at the committee's sessions. Because active international operators with a vote might also be domestic operators, but no domestic operators could have a vote, there is a question as to what reaction might arise in countries like the United States with a far-reaching domestic network in addition to plans for international operation.

Some observers, on the other hand, question as to what reaction might arise in countries like the United States with a far-reaching domestic network in addition to plans for international operation.

Some observers, on the other hand, question as to what reaction might arise in countries like the United States with a far-reaching domestic network in addition to plans for international operation.

**Executive Committee**—The execu-

### Objectives

Aims of the proposed international air transport association, as set forth in proposed articles, are these:

- To promote safe, regular and economical air transport for the benefit of the peoples of the world, to foster air commerce, and to study the problems connected therewith.
- To provide means for collaboration among the air transport enterprises engaged directly or indirectly in international air transport service.
- To cooperate with the International Civil Aviation Organization and other international organizations.

utive committee would have also to 12 members, in addition to the president. All would be chosen from among representatives of active members and all would serve without pay. Position of the president would be honorary, with election at each annual meeting.

Dues of active members would be fixed annually on the basis of gross licensed tonnage of each member's fleet operated in commercial international air transport. Dues for associate members would be determined by the general meeting above a minimum set in the by-laws. Recommendations for all assessments and the association's budget would be made in advance by the executive committee.

The drafting committee chose two of the several names considered: International Air Transport Association, or Association of International Airline Operators. While initials of the first are those of the International Air Traffic Association, the suggestion is that the latter will be discarded as soon as the new organization is effected.

### Plan Can.-Brazil Link

Direct airline connection between Canada and Brazil is contemplated by Brazilian Airlines, A. L. Duncan, an official of the company, intimated during a visit in Montreal.

No official plans of the Canadian government's airline, Trans-Canada Airlines, have been announced as to transportation to Brazil, but it has been disclosed that TCA plans West Indian and South American service after the war.

### 1944 Record Year For U. S. Airlines

Operations in all departments—passenger, mail and express—at all time highs, Gorrill predicts gross revenues for carriers will top \$150 million.

Advance estimates all agree that 1944 will prove the domestic airlines' greatest year thus far, with operations in all departments—passenger, mail, and express—at all time highs. Col. E. S. Gorrill, president of the Air Transport Association, has predicted gross 1944 revenues for all U. S. carriers will be above \$150 million.

From a low of 164 aircraft in service on Dec. 31, 1943, the domestic lines had newly replaced their pre-war equipment level of 341 planes by the year end, with slightly more than 300 planes in use. With this curtailed fleet, the

carriers performed a bigger job in 1944 than had been accomplished in any previous year.

**Utilization Rate High**—Planes in service received a harder workload than ever before in airline history. Colonel Gorrill estimates that scheduled flights during 1944 represented an national average of 1,325 miles per plane per day, with every plane operating 11 hours out of each 24. Pre-war daily plane employment of 6 to 7 hours' actual flight had been considered good performance. Civil Aeronautics Administration predicted, like Gorrill, that the final 1944 average load factor will be somewhat in excess of 80 percent.

**Mail Found Mileage**—Estimates of mail pound mileage vary somewhat. AIA believes the figure will exceed 30 billion, or about 12 for 1943 and 43 in 1942, while CAA's estimate is near 184 billion. Both agree that express pound miles may reach 32.5 billion, com-

pared with 31.2 for 1943 and 22.6 for 1942.

Colonel Gorrill's statement shows that during the past year domestic carriers probably will have received \$138 million in passenger revenues, \$30 million mail revenues, \$9 million from express, and an additional \$3 million from miscellaneous sources, for a total gross 1944 revenue of more than \$180 million.

### Offer Airline Course

University of Denver offers airline operation course leading to a bachelor of science or bachelor of arts degree and a continuation course leading to a degree of master of arts with the same major. School officials believe it is the first offering of a graduate degree with a major in air courses.

These include airline practices, air transportation economics, business mathematics, airline geography.

REVENUE MILES FLOWN

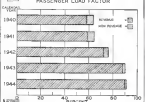


MAIL TON MILES FLOWN



**Record Year for Domestic Airlines** The graphs above, prepared by the Civil Aeronautics Administration on the basis of estimated annual totals, show that 1944 was the biggest year in airline history for all phases of operations. Revenue miles flown (upper left)

PASSENGER LOAD FACTOR



EXPRESS TON MILES FLOWN



suggested all previous years, has largely to the unexpected achievements in plane utilization (upper right), Mail ton-miles (lower left) and express ton-miles (lower right) also broke existing records, CAA predicts.

policy and personnel management. Officials of Continental, Western and Braniff give special lectures. D. E. began the courses after quarrying 13 airlines on which studies should be offered young people who want to make a career with the airlines.

## UAL Fare Cut Plan May Presage Others

Proposed reduction gives impetus to move for general shrinking of passenger charges.

Industry-wide plans for a general fare reduction, long under discussion as a post-war project, received new impetus late last month with announcement by William A. Patterson, president of United Air Lines, that his company plans to lower its rates within 60 days. Prospects seem good that a downsway revision of the rate structure may be accomplished during the first few months of 1945 as several other carriers have weakened their studies, presumably preparing to follow United's lead if necessary.

Opinion generally is that other transcontinental and larger regional carriers probably will institute comparable reductions. Economies of most lines are sufficiently high to absorb a fare cut without serious strain, although some small carriers whose margins of profit is relatively narrow may feel the pinch more severely.

**Reduction Plan Studied**—United has not disclosed actual reduc-

tion percentage it plans to institute. Patterson announced that results of United's studies now in progress will be made known in two months. The last general fare cut, in the summer of 1943, brought reductions of between 7 and 10 percent.

It was pointed out, however, that any widespread fare reduction at the present might be interpreted by the Office of Defense Transportation as a form of airline advertising. Should a general decrease take place, the airlines might thereby incur further ODT criticism for soliciting increased business.

Civil Aeronautics Board is generally favorable to lower rates. Chairman E. W. Parker has repeatedly stated along with many others that fares must be brought down if air transport is to compete successfully with surface carriers, and air travel is to be offered to a greatly broadened tier market.

## Rate Cuts Expected In New REA Tariff

Tailored to reflect revisions in the domestic air route pattern since 1943, the new air express tariff filed by the Railway Express Division of the Railway Express Agency with the Civil Aeronautics Board will result in a number of rate decreases between many points on the airline system. Although wartime routes and airport expenditures will make a few increases, the overall tariff revision takes advantage of shorter routes

established by recent CAB new route authorizations to institute numerous reductions.

**Rate Structure Not Lowered**—Base for computing rates remains generally at the established 3 and one-half cents per 100 miles, and the decreases do not represent a general lowering of REA's rate structure.

The new tariff, effective Jan. 15, is the eighth in the series of air express tariffs filed by REA. A new feature is the incorporation of a complete set of rules and regulations covering technical phases of air express shipments. A numerical system of cross-references replaces the former place-name cross index.

## Idlewild in Dispute On Terminal Building

Some prospective plans favor multiple stations plus over single large site serving all lines, similar controversy going under way in Chicago.

Disagreement between management of New York's Idlewild Airport and prospective airline tenants has arisen over the question whether to provide a single terminal building, or multiple stations—one for each airline. Controversy over the same thing is beginning to simmer in Chicago, as the time nears to plan replacement of old facilities there.

Airport management, backed by city government, tend to favor the common terminal, which enables them to sell concessions for large sums to help defray expenses. The management of La Guardia field, including Mayor La Guardia, has been displeased ever since the latest airlines there started bypassing the main building and directing their passengers right up to the gate of departure.

**Multiple Stations Favored**—Some operators, if not a majority, now tend to favor multiple stations at all large terminals. As speed in the air increases, time lost on the ground becomes relatively more important.

Operators who favor the multiple station system believe they can provide in their own buildings all conveniences offered by the ground central type of terminal and cut down the passenger's waiting time and annoyances. The blaring loudspeaker, a very useful invention in its day, is coming badman now and many operators would

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## A SYMBOL OF THE HIGHEST STANDARDS IN AVIATION TRAINING

## SINCE 1929—THE BEST TO BE HAD IN SPECIALIZED TRAINING IN

## AERONAUTICAL ENGINEERING AND MASTER AVIATION MECHANICS

# AVIATION CAREER

Crossed during the war, the name "Cal-Aero" has become world famous, in the field of aviation training, as one of the original civil schools that proved so successful in the Civil-Aero program of training pilots for the Army Air Forces. At the same time this distinguished name appears at Cal-Aero Technical Institute, was the first school and for a long time the only school in the West to be selected by the Army Air Forces to train ground crew members. With that school, both under the personal supervision of Major C. C. Moseley, it was the first school in planning for the post-war period, that they should come under the distinguished name of "Cal-Aero."

Respected by citizens for distinguished service in training men for the Army Air Forces with an unparalleled record of safety and efficiency, these schools have trained more than 30,000 pilots and 7,000 ground crew members. During these years, 1,500 have been decorated for valor above and beyond the call of duty. As the time nears to plan replacement of old facilities there, airport management, backed by city government, tend to favor the common terminal, which enables them to sell concessions for large sums to help defray expenses.

With such a record of achievement—ON MERIT ALONE—Cal-Aero Technical Institute, with its place of pre-eminence in the educational field of Aeronautical Engineering and Master Aviation Mechanics, averages longer and finer than

ever before on its own Class IV airport, Grand Central Air Terminal, (Atlanta) for the last several years in one or several of the standard factors. Other than in name, there is no change in the school—same management—same location—same personnel—same fine specialized technical training, incorporating all of the best developments and methods to insure your future career in Aviation. Flight Training is available in Army Air Force cadets for the duration.

Now NOW for your FUTURE CAREER in the expanding field of Aviation. America is going to fly for pleasure, for business, for commerce. With more airplanes, airlines, airports and facilities planned for the post-war period, there will be more and more opportunity for the career trained man in aviation—the man with a thorough foundation of technical training. Since 1919 this school now known as CAL-AERO TECHNICAL INSTITUTE, has continued to produce men who were and will be positive of trust and responsibility in all phases of the Aviation industry. What this school has done for them it can do for you. Today, as in the past, we are training first-class, conscientious young men from many states and foreign countries, despite the limitations of wartime travel. Among them are a great many service men, anxious to do themselves for in studying flight in the Golden Age of Aviation, who have received upon discharge. Write or mail coupon TODAY for full information about the possibilities of a post-war Aviation Career.



## AT SAE CARGO MEETING:

This picture taken at the air cargo meeting of the Society of Aeronautical Engineers, at Chicago, shows, left to right, May Logan, Air Transport Command; Harry Buck, chief of air cargo development for PCA, Comdr. N. J. Burr, headquarters NATS; Col Harold Harris, chief of staff, ATC, and Robert B. Roane, vice president, Roane Products Co.



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like to get rid of it. If the speaker were necessary at all in single status, it could be toned down and used less, they say.

## UAL and C & S Win Aviation Awards

United Air Lines and Chicago and Southern Air Lines were 1944 recipients of Aviation magazine's annual awards for outstanding maintenance and development achievements. United for carriers operating more than 19 million revenue plane miles annually, and C&S in the under 10 million class. Both lines achieved new high records in revenue miles operated during the year.

United operated a record 27,528,417 revenue miles with fewer than seven mechanical delays per 100,000 miles to complete 20 percent of all scheduled domestic operations. Plane utilization averaged nearly 11½ hours per day for each plane, compared with a 1943 figure of 9½ hours. Officials of the line report that in recent months the utilization figure has risen to 12½ hours.

**New Record**—Chicago and Southern completed 91.64 percent of all scheduled flights during the year for a new operations record of 2-

## Chicago Air Plan

Changes take other island status, a vitalizing staff as a great post-war air terminal that city planners there are also concerned with near immediate aviation considerations. They want to make sure that feeder lines and civil aviation will get no more than the fashionable Michigan Boulevard line from

Some architects have countered with the suggestion that the nation Illinois Central tracks in the parkway be routed over and made into a landing strip. The feasibility job, they think, might be enthusiastically acceptable.

518,278 revenue miles. Maintenance performance resulted in more than 13,000 miles being operated for each mechanical interruption. C&S's utilization figure came from 10.9 hours per day during the first months of the year to a record high of 13.43 hours in October and November. Leslie Neville, editor of Aviation, presented the plaque to United at Chicago and John Foster, managing editor, to C&S at Memphis.

## ATC Starts Transit Of Civil Passengers

Planes of the Army's Air Transport Command began carrying passengers for the first time, under terms of the executive order issued by President Roosevelt Oct. 24. State Department certification of all prospective passengers is required, but priority remains with ATC.

Fares will be based on a 12 cents per plane mile charge over the shortest regularly operated route between the point of departure and point of destination. Where commercial service exists or has existed, ATC fares will be at least equal to the commercial rates. The Command will not carry passengers who can be accommodated by commercial carriers.

**Limited Lines**—ATC passage will be on a limited basis, it was announced, and will be available only to those who are on business considered by the State Department as vital to relief and rehabilitation activities or to the resumption of economic or other enterprises disrupted by the war and whose reestablishment is considered essential.

At year's end, eight U. S. airlines were operating planes in international service under contract to the Air Transport Command and the Naval Air Transport Service.

Most recent addition to ATC's 102,000 mile route system is an 8,000 mile link between the U. S. and the Philippine Islands via Hawaii and Japan.

## Civil Air Lines To Use Bae Field

Army Air Forces has given preliminary approval to use of Bae Field, military air base southwest of Fort Wayne, Ind., by civil air lines.

Barrows at Smith Municipal airport are breaking up under the weight of suitcases. The city already has made tentative plans for moving airline operations to Bae, under contract with the military, including construction of a \$20,000 hangar and air terminal building.

This will be a one-story concrete block building to house offices of TWA and Chicago & Southern, waiting rooms, and an office for Robert T. Schott, the city's director of aeronautics.

## Produce Business Big Post-War Prize

Field-grown farm produce is the big post-war prize for which the airlines will compete against the railroads. If the airlines can get it, the scheduled air fleet will grow rapidly. If not, expansion will be much slower.

Success for the airlines depends on several uncertainties. One of these is whether they can deliver produce without the expense of refrigeration, and to what extent the natural cold of altitude can substitute for refrigeration. Another contingency is whether landing strips near packing plants can be used to save long ground hauls. It has been proposed that fresh meats as well as field crops be chilled or frozen in plants in production areas and rushed to local airports and flown at high altitude to distributors.

**Fast-Mail Schedules**—The airlines expect that the demands will put on flat streamlined diesel freight trains which can deliver Southern farm products to Northern cities in 24 hours—as fast or faster than they carried passengers could be handled by rail. Rail service will be hard to beat. In general, on trunk lines, slow, high-altitude cargo planes are out, in favor of 4-engine high-speed equipment. Experts are beginning to question whether 3-engine, a volume item, can be handled by airlines in the early future, against rail competition.

## FAA Membership Up

Federal Airlines Association officials anticipate a membership gain of nearly 50 by the time this month is over. FAA was organized last June, with 36 firms on its roster.

An executive committee meeting was held recently to discuss general meeting and further plans for the Association's educational program, in which associate, or industrial members are expected to participate actively. Present members: Harry H. Stricker, president; William H. Kent, vice-president; W. R. Orin, secretary; J. J. Mischenko, Jr., treasurer; Dan Reeves, assistant secretary-treasurer, and Ray H. Rydberg, chief of flight safety service.

**Invitations Sent Out**—Registered Valise has joined the group as first associate member. Invitations have gone to firms in the

## AIR TRAFFIC CONFERENCE ORGANIZATION



## AIR TRAFFIC CONFERENCE TO BE REORGANIZED!

Chart above shows Air Traffic Conference reorganization was planned at recent meeting to give cargo traffic equal consideration with passenger. Committee has been appointed to work out details, including necessary changes in conference bylaws, but about two or three weeks are expected to be required to complete reorganization work.

aircraft and equipment industry and such related enterprises as aviation insurance, oil companies and others.

Meanwhile, response has been good from prospective regular members, with several feeder lines additional to the charter members wishing in for details.

## CAL Puts Converted DC-3 into Service

First airline among the Lockheed users to get a converted DC-3 into service in Continental, which a few days ago started twice-daily service on its Denver-Tokyo-Kansas City route. Frequency formerly was one round trip daily.

Prospects are that Mid-Continent will be the next line that formerly used the 14-passenger Lodestars exclusively to get the DC-3 passenger Douglas ships into service. National has indicated it will be coming along next month.

## First Passengers

First civilian passengers carried by the Air Transport Command between India and the U. S. under terms of the Executive Order authorizing ATC and Naval Air Transport Service to charge fares were Indian delegates to the recent United Nations General Conference at Rio, N. Y. One-way fare as charged by ATC was reportedly \$2000.

## Automatic Landings By Radar Predicted

Rapidly developing radar eventually will supplement and possibly replace most or all elements of the present glide path and localizer instrument landing procedure, in the opinion of the chief of research for one of the big airlines.

The glide path and localizer system, developed in cooperation with the Federal Aviation Administration before the war, is not yet in regular commercial use but it will be immediately after the war.

**Peak Standard Practice**—Whatever combination of radio range and radar eventually are used, the object will be to develop an approach and landing which will be standard practice, day and night. The present practice of using a special procedure for overcast and contact flying in good visibility is on its way out. When the standard is achieved, pilots will use it in fair weather and foul.

Present radar equipment is capable of projecting on a screen the rough outline of the field and the objects surrounding it on the ground and in the air. Looking at it, the pilot can fly the plane down by hand, or the controls may be rigged so that radar will land it automatically. It is possible that elements of the screen and automatic radar will be combined, and elements of the radio range system may be included for a long time.



"Aviation" Award For Airline Maintenance: F. D. Brooks, superintendent of maintenance of Chicago and Southern Air Lines, receives Aviation magazine's maintenance award for 1944 from John Foster, managing editor of the publication. Watching the presentation, which took place at Memphis, are L. E. Anderson, superintendent of engineering, and Bruce Brown, vice-president in charge of operations. The award was for airline operating up to 30,000,000 miles in year. The maintenance plaque for lines operating over that mileage was presented to United Air Lines by L. E. Neville, editor of Aviation, at Chicago.





*48 if by day 24 if by night*



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